

1 BEFORE THE STATE OF WASHINGTON
2 ENERGY FACILITY SITE EVALUATION COUNCIL
3

4 In the Matter of Application No. 2004-01:
5 WIND RIDGE POWER PARTNERS, LLC;
6 WILD HORSE WIND POWER PROJECT
7
8

EXHIBIT 26(MB-T)

9
10 **APPLICANT'S PREFILED DIRECT TESTIMONY**
11 **WITNESS # 7: MARK BASTASCH**
12
13

14 Q Please state your name and business address.
15

16 A My name is Mark Bastasch and my business address is 825 NE Multnomah, Portland, OR
17 97232-2146.
18

19 Q What is your present occupation, profession; and what are your duties and responsibilities?
20
21
22
23
24
25

EXHIBIT 26 (MB-T) - 1
MARK BASTASCH
PREFILED TESTIMONY

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1 A I am employed by CH2M Hill. CH2M Hill provides environmental and engineering consulting
2 services to organizations such Zilkha Renewable Energy. We assist those organizations in
3 analyzing environmental impacts of projects such as the Wild Horse Wind Power Project. I am
4 an acoustical, civil and environmental engineer. My duties on this project included assistance in
5 the preparation of the Air and Noise portions of the Application for Site Certification and
6 subsequent filings related to these subject areas.

7
8 Q Would you please identify what has been marked for identification as Exhibit 26-1 (MB-1).

9
10 A Exhibit 26-1(MB-1) is a résumé of my educational background and employment experience.

11
12 Q Are you sponsoring any portions of the Application for Site Certification for the Wild Horse
13 Wind Power Project?

14
15 A Yes. I am sponsoring the following sections for which I was primarily responsible for the
16 analysis and development:

17 Section 1.6.11 Summary, Cumulative Impacts, Air Quality

18 Section 1.6.12 Summary, Cumulative Impacts, Noise

19 Section 3.2.1.2 Air Quality Standards

20 Section 3.2.2.1 Impacts of Proposed Action, Construction: Emissions,
21 Temporary Equipment Sources; Emissions, Fugitive Dust
22 Sources; Fugitive Dust, Control, General

23 Section 3.9 Noise

24 Section 3.17.16 Cumulative Impacts, Air Quality

Section 3.17.17 Cumulative Impacts, Noise

Q What exhibits that are part of the Application that you are sponsoring?

A I am sponsoring the following exhibits to the Application:

Exhibit 15A Residences in Project Vicinity

Exhibit 15B Results of Noise Impact Model

Q Are you familiar with these sections of the Application and Exhibits?

A Yes

Q Did you prepare these sections and exhibits, or, if not, did you direct and/or supervise its preparation?

A Yes

Q Is the information in these sections and exhibits within your area of authority and /or expertise?

A Yes

1 Q Are the contents of these sections and exhibits of the Application either based upon your
2 own knowledge, or upon evidence, such as studies and reports as reasonably prudent
3 persons in your field and expertise are accustomed to rely in the conduct of their affairs?
4

5 A Yes.
6

7 Q To the best of your knowledge, are the contents of these sections and exhibits of the
8 Application true?
9

10 A Yes.
11

12 Q Do you incorporate the facts and content of these sections and exhibits as part of your
13 testimony?
14

15 A Yes.
16

17 Q Are you able to answer questions under cross examination regarding these sections and
18 exhibits?
19

20 A Yes.
21

22 Q Do you sponsor the admission into evidence of these sections and exhibits of the
23 Application?
24

1 A Yes

2
3 Q Are there any modifications or corrections to be made to those portions of the Application that
4 you are sponsoring?

5
6 A No.

7
8 Q Would you please summarize and briefly describe your evaluation of potential noise
9 resulting from the construction an operation of the project.

10
11 A Noise generated by construction of the Project is expected to vary, depending on
12 the construction phase (see ASC Section 2.2.6, 'Project Construction Schedule and
13 Workforce'). Table 3.9.2-1 in the Application for Site Certification lists the typical noise
14 levels associated with common construction equipment at various distances. These levels
15 range from 54 to 62 dBA at 1,000 feet from the source. All noise-generating construction
16 activities will be conducted between the hours of 7a.m. and 10p.m. and are therefore
17 exempt from the State of Washington Noise Limits which are 60 dBA (daytime) and 50
18 dBA (nighttime) at residential properties (per 173-60-050 WAC). Blasting is anticipated
19 for the foundations and potentially some road areas. Blasting will be conducted only
20 between the hours of 7a.m. and 10p.m. and is anticipated to occur over a period of about
21 eight weeks. Blasting activities are specifically exempted from the noise regulations (per
22 WAC 173-60-050 (1)(c)).

1 Q Are there any cumulative effects regarding noise from the Desert Claim, Kittitas Valley
2 and Wild Horse wind power projects.

3
4 A No. The Wild Horse project is located over 12 miles from the Desert Claim and Kittitas
5 Valley project. There should be no cumulative effects with regard to noise from these
6 projects.

7
8 Given that the closest distance between a residence and a wind turbine is nearly two
9 miles, noise levels are anticipated to be inaudible, or at most similar in level to a soft
10 whisper. Although the exact turbine model to be used for the Project has not been
11 determined yet, conservative values for the type of equipment being considered for this
12 Project have been used to predict project noise levels. Noise levels were modeled based
13 on a 'not to exceed a maximum sound power level' of 110 dBA with a reference wind
14 speed of 18 mph (8 meters per second) at 33-feet (10 meters) in accordance with the
15 protocol established in IEC 61400. Typical guaranteed sound power levels for turbines
16 under consideration for this project are 6 dBA less (104 dBA) than those used in the
17 model.

18
19 A three-dimensional noise model was developed using CADNA/A, a sophisticated noise
20 modeling program developed by DataKustik, GmbH, Munich, Germany. The algorithms
21 in CADNA/A are based on the International Standard ISO -9613-2 "Attenuation of
22 Sound During Propagation Outdoors". Octave band sound power levels for the
23 wind turbines and topographic information from the USGS were input into the
24 model. The wind turbine noise emissions are required by 173-60 WAC not to exceed 70

1 dBA at all Class C EDNA (industrial/agricultural) property boundaries of non-
2 participating land owners. The Project will comply with this requirement at all adjacent
3 property boundaries. Non-participating residential daytime levels are required by 173-60
4 WAC not to exceed 60 dBA while nighttime levels are not to exceed 50 dBA. As shown
5 in Exhibit 15B, 'Noise', the Project will comply with the more restrictive nighttime limit
6 of 50 dBA at all existing residential structures

7
8 A concrete batch plant and portable rock crusher will used for approximately 6 to 8
9 months during the road and foundation construction phases. This equipment will be
10 permitted as required by Washington Department of Ecology. ASC Exhibit 7 contains a
11 copy of the air permit application for the portable rock crusher.

12
13 The Applicant is committed to designing and operating the Project in a manner that
14 complies with all applicable air and noise regulations. In accordance with the various
15 provisions of WAC 173-400-040, the Project will employ reasonable precautions to
16 minimize fugitive dust from being airborne. The Applicant will implement an effective
17 dust control program to minimize any potential disturbance from construction-related
18 dust. No significant impacts from dust are expected.